

Registered Federal

Friday
February 1, 1980

Part V

Department of Energy

Office of Conservation and Solar Energy

Guidelines for Energy Management in
General Operations of the Federal
Government

DEPARTMENT OF ENERGY**Office of Conservation and Solar Energy****10 CFR Part 436****Federal Energy Management and Planning Programs; Guidelines for Energy Management in General Operations of the Federal Government****AGENCY:** Department of Energy.**ACTION:** Notice of proposed rulemaking and public hearing.

SUMMARY: The Department of Energy today proposes guidelines for use by Federal agencies in their efforts to develop an overall 10-year energy management plan to reduce the rate of energy consumption and increase energy efficiencies in their general operations. These guidelines pertain to all Federal general operations, including energy used for general transportation, services, industrial or production type activities, and for training and operational readiness functions. Guidelines for the related "buildings" aspects of the Federal Energy Management and Planning Programs such as heating, lighting, air conditioning and hot water systems were published as a final rule in the Federal Register on November 14, 1979.

The purposes of the General Operations Guidelines are: To reduce the rate of energy consumption, to increase energy efficiency, to provide a methodology for reporting agency progress in meeting the goals of those plans, and to promote contingency planning to assuage the impact of a sudden disruption in the supply of oil-based fuels, natural gas, or electricity. In addition, based on agency reports, the Department of Energy will have a factual basis to disseminate energy-saving information to both the public and private sectors; to initiate actions within the Federal Government that may be necessary to avoid occurrence of energy supply crises; and to promote the establishment and attainment of energy conservation goals on an agency by agency basis.

DATES: Written comments by March 3, 1980; requests to speak by February 15, 1980; hearing to be held on February 25, 1980.

ADDRESSES: Comments and requests to speak at the hearing to: Carol Snipes, Office of Conservation and Solar Energy, Department of Energy, 20 Massachusetts Ave., N.W., Washington, D.C., 20585.

Public hearing to be held in Room 2105, 2000 M St., N.W., Washington, D.C., beginning at 9:30 a.m., February 25, 1980.

FOR FURTHER INFORMATION CONTACT:

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Carol Snipes, (202) 376-1851, Office of Conservation and Solar Energy, Department of Energy, 20 Massachusetts Ave., N.W., Washington, D.C. 20585.
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SUPPLEMENTARY INFORMATION:

- I. Introduction
 - A. Background and Authorities
 - B. Energy Use by Major Federal Agencies
 - C. Federal Energy Management Program Administration
- II. General Operations 10-Year Plan
 - A. General Operations Energy Management Program Elements
 - B. Plan Format
 - C. Plan Content
- III. Program Goal Setting
- IV. Energy Conservation Measures and Standards
- V. Contingency Plan
- VI. Reporting Requirements
- VII. Plan and Waiver Submission, Review, and Approval
- VIII. National Environmental Policy Act Review
- IX. Comment and Hearing Procedures
 - A. Written Comments
 - B. Request Procedures
 - C. Conduct of Hearings

I. Introduction**A. Background and Authorities**

Today, and for the foreseeable future, Federal agencies are faced with rising energy costs and the possibility of a sudden, and possibly severe, reduction of oil-based energy resources, natural gas or electricity. To assist in the management of these problems, the Department of Energy today proposes guidelines to facilitate energy conservation in the general operations of Federal agencies and further, to promote contingency planning to reduce the impact upon Federal agencies of a sudden reduction in oil-based energy resources, natural gas or electricity. The proposed guidelines are intended to enable DOE to initiate necessary actions within the Federal Government to avoid energy supply crises and to promote the establishment and the attainment of energy conservation goals on an agency by agency basis. These guidelines are proposed pursuant to and in accordance

with Section 381 of the Energy Policy and Conservation Act, as amended (EPCA) 42 U.S.C. 6361; Executive Order 11912, as amended by Executive Order 12003 (Executive Order), 42 FR 37523 (July 20, 1977); Title V, Part 3, of the National Energy Conservation Policy Act (NECPA), 92 Stat. 3275; Section 644 of the Department of Energy Organization Act, 42 U.S.C. 7254; Presidential Memorandum, (Reduction of Energy Use by the Federal Government, February 2, 1979); and Presidential Memorandum, (Required 5% Reduction in Agency Energy Use April 10, 1979); Executive Order 12185, 44 FR 75093 (December 17, 1979).

The Federal Energy Management and Planning Program (FEMP) was established in 1973 in response to a Presidential Memorandum which directed Federal departments and agencies to achieve a 7 percent energy use reduction in FY 1974 from the energy use levels of FY 1973. EPCA formalized a number of ongoing FEMP activities and added other conservation measures.

Under the Executive Order and by operation of Section 301 of the Department of Energy Organization Act, 42 U.S.C. 7151, the Secretary of DOE is responsible for developing a Federal 10-year energy management plan. The Executive Order requires that each Executive agency submit to DOE an overall Federal 10-year energy management plan for conserving fuel and energy in all of its operations. Each agency plan is to include a Buildings Plan and a General Operations Plan. Guidelines for establishing the Buildings Plans were published as final rule for inclusion in 10 CFR Part 436, Subpart C (44 FR 65714, November 14, 1979), and this notice proposes guidelines to establish the General Operations Plan.

These guidelines establish a series of actions to be taken by Federal agencies to reduce energy use. Such actions will include establishment of specific energy reduction goals; identification of appropriate baselines for charting and evaluating progress toward agency goals; formulation of long-term plans for achievement of goals; adoption of specific conservation measures; development of contingency plans and establishment of specific evaluation and reporting procedures. All such actions shall be undertaken in accordance with a time-phased program coordinated with the Department of Energy, a committee of Federal agency representatives, and the Office of Management and Budget. The guidelines are designed to assure the earliest possible implementation of all known cost-effective energy conservation measures. It is anticipated

that any such action should not jeopardize attainment of fundamental agency functions or missions.

The Executive order sets forth a framework for the development of a Federal 10-year energy management plan for buildings with very specific goals, i.e., 20 percent and 45 percent reduction of average energy use per gross square foot of old and new buildings respectively, while general operations are less prescriptive because energy conservation in general operations must be balanced against agency primary missions. Improperly planned and implemented application of conservation measures could lead to a serious degradation in government services to the Nation; therefore, today's proposed guidelines leave goal-setting to each individual agency. DOE considered assigning annual energy consumption targets (energy Btu budgets) for each Federal agency during the near-term period of 1979-1985. However, information on individual agency missions and budgets for that time period was inadequate and designating a target might be misconstrued as a given constraint which could have an unacceptable impact upon respective agency missions. However, management methodologies for planning and control and selected operational measures for obtaining energy efficiencies or reductions are prescribed. Further, DOE intends to add to the guidelines, as needed, supplementary management controls, further energy conservation measures for agency consideration, and energy-related standards of operation.

Since the missions and operating responsibilities of Federal agencies vary widely, general operations planning consists of heterogeneous sets of agency-specific programs, projects and activities. Agency reports indicate that all major and most lesser energy-using agencies have ongoing programs to train, motivate, and educate employees; to review and revise administrative practices to make them more energy efficient; to eliminate unnecessary travel; to purchase fuel-efficient automobiles and other equipment; to curtail unnecessary activities and to improve operational scheduling and maintenance. These proposed guidelines stress procedures to utilize the heterogeneous plans in developing an overall Federal 10-year plan for energy management in the area of general operations. While most Federal agencies have already made progress toward reducing energy use, these guidelines are expected to reinforce ongoing energy conservation efforts and provide a more comprehensive and coordinated

planning process for achieving greater reductions and efficiencies in energy use.

On April 10, 1979, the President directed heads of executive agencies to immediately reduce their energy use by 5 percent. This 5 percent reduction is to be achieved during the one year period from April 1, 1979 to March 31, 1980, as compared with the preceding twelve-month period. In reaching this objective, the executive agencies are directed to:

- Reduce their use of automotive fuels by 10 percent
- Set building thermostat settings at no lower than 80 degrees (subsequently 78 degrees by "Emergency Building Temperature Regulations", published at 44 FR 41205, July 16, 1979) during the summer cooling season and no higher than 65 degrees for working hours and 55 degrees for non-working hours during the heating season
- Take such other steps as may be necessary to achieve the level of 5 percent savings.

The Presidential Memorandum further required that, within thirty days, each Federal agency submit to the Department of Energy its specific plan for achieving the directed energy use reductions. The goals set forth in the April 10, 1979 Presidential Memorandum are to be taken into consideration by agencies in establishing goals under these proposed guidelines (see § 436.73).

Today's proposal was developed in consultation with the Office of Management and Budget (OMB), the General Services Administration (GSA), the Department of Defense (DOD), the Veterans Administration (VA) and other Federal agencies who provided advice, participated in interagency meetings, and reviewed drafts of the guidelines. The Director of OMB has concurred in today's proposal.

While the Executive Order speaks of "Executive agencies," the effect of Section 501 of the NECPA is to make many of the Executive Order provisions regarding the Federal 10-year energy management plan applicable to Executive agencies as defined by 5 U.S.C. 105 and the United States Postal Service. These agencies are referred to in this notice as "Federal agencies." In addition, because of the significant role of DOD in energy management, the Departments of the Army, Navy and Air Force and the collective DOD agencies will be reported separately. However, data from the military departments will be published under the heading of the Department of Defense, and all formal contact from DOE will be with DOD.

These proposed guidelines for general operations are promulgated as a Subpart of Part 436 of Title 10, Code of Federal

Regulations, which is entitled "Federal Energy Management and Planning Programs." Part 436 comprises the DOE rules for conservation and solar programs for Federal energy use under Section 381 of the EPCA, the Executive Order, and Title V of the NECPA. The Subparts which are expected to be included are:

- Methodology and Procedures for Life Cycle Cost Analyses;
- Procedures for Preliminary Energy Audits;
- Guidelines for Buildings Plans;
- Solar in Federal Buildings Demonstration Program Rules;
- Federal Photovoltaic Utilization Program Rules; and
- Guidelines for General Operations Plans.

B. Energy Use by Major Federal Agencies

The Federal Government is the single largest user of energy in the Nation, accounting for 2.2 percent of the energy consumed in the United States in FY 1978. This energy is used by almost 6 million people, in more than 490,000 buildings and in operating more than 500,000 aircraft and motor vehicles of all types. For one year, this amount of energy would be sufficient to:

- Heat 11 million homes, or
- Operate 18 million automobiles—as many automobiles as are currently registered in the states of New York and California combined.

Federal energy use, by fuel type, is shown in Table 1. The major portion (59 percent) of the energy used is in the form of petroleum-based fuels, most of which is used in general operations as opposed to buildings. More than 170 million barrels of petroleum products were used in FY 1978. If fuels consumed by Government-owned and contractor-operated (GOCO) plants are defined as general operations, the total increases. Therefore, management's attention to the area of general operations is crucial to the President's overall energy management plan called for in the Executive Order.

Table 1.—Fuel Use by Type in the Federal Government in Fiscal Year 1978

Fuel type	Amount		
	Trillion Btu	Million barrels of oil equivalent (MBOE)	Percent of total
Jet fuel.....	601.2	103.6	35.5
Diesel and petroleum distillates.....	142.4	24.5	8.4
Fuel oil.....	177.1	30.5	10.4
Gasoline.....	69.9	10.3	3.5
Navy special.....	7.9	1.4	.5
Aviation gasoline.....	6.2	1.0	.4

Table 1.—Fuel Use by Type in the Federal Government in Fiscal Year 1978—Continued

Fuel type	Amount		Percent of total
	Trillion Btu	Million barrels of oil equivalent (MBOE)	
Electricity.....	478.6	82.2	28.1
Natural gas.....	144.8	25.0	8.5
Coal.....	67.0	11.5	4.0
Other ¹	11.7	2.0	.7
Total all fuels.....	1694.8	292.0	

¹ Other fuels include propane and purchased steam.

Source: DOE.

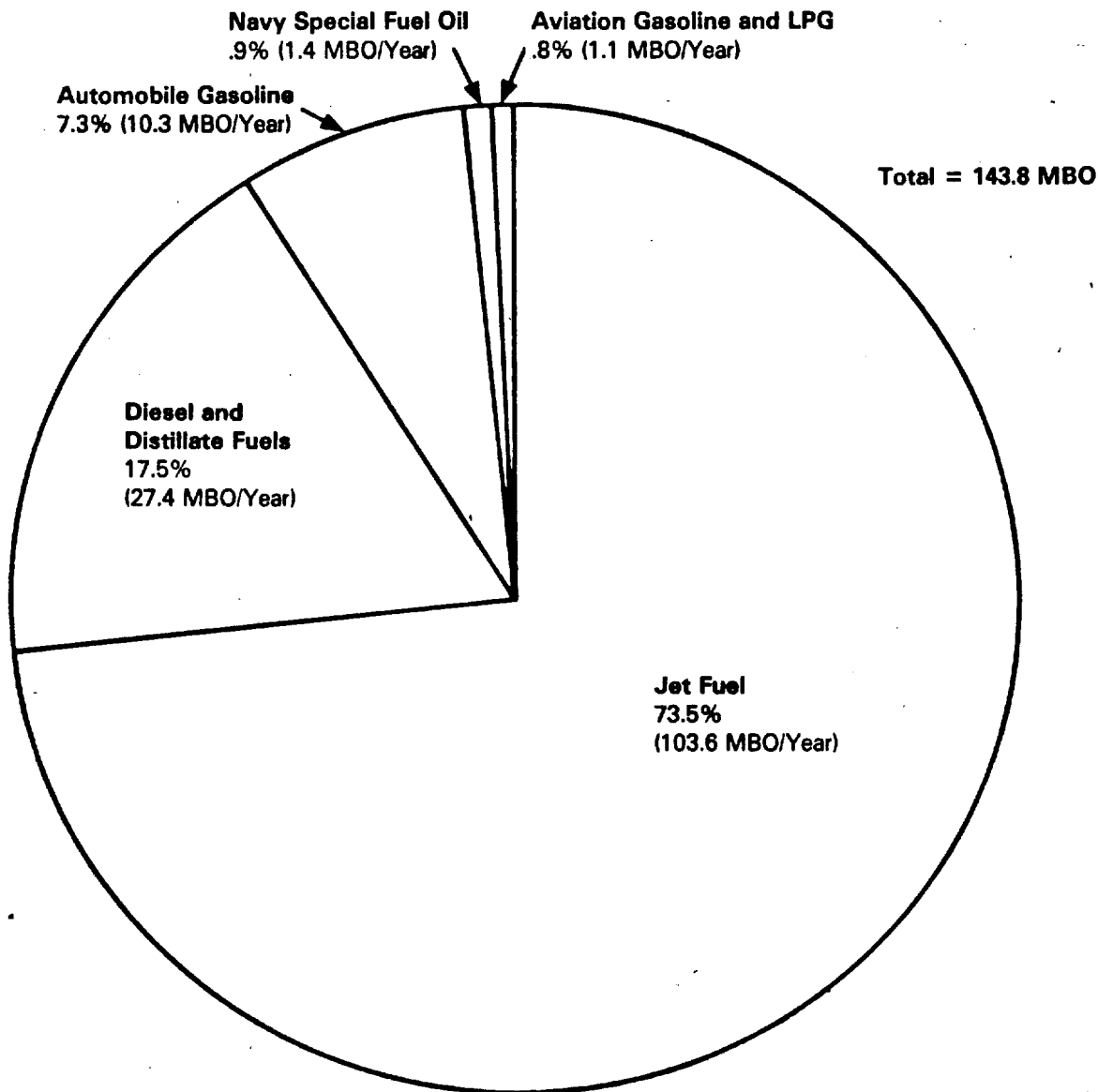
The ten largest energy-using Federal agencies account for over 98 percent of the energy consumed by the executive branch of the Federal Government. These agencies, in order of energy use, with approximate percentage are:

Agency:	Percent
● Department of Defense (DOD).....	80.4
● Department of Energy (DOE).....	5.0
● U.S. Postal Service (USPS).....	3.2
● General Services Administration.....	2.6
● Veterans Administration (VA).....	2.3
● Department of Transportation (DOT).....	1.8
● National Aeronautics and Space Administration (NASA).....	1.3
● Department of the Interior (DOI).....	.7
● Department of Agriculture (DOA).....	.6
● Department of Health, Education, and Welfare (HEW).....	.5
Total.....	98.2

The remaining 58 agencies accounted for less than 1.8 percent of the total energy used by the Federal Government.

The Federal Government is engaged daily in a wide range of general operations designed to meet national needs in such areas as defense, law enforcement, power production, research and development, and communications. In performing these vital missions, Federal agencies use energy to power more than:

- 22,000 aircraft of all types
- 650,000 automobiles, trucks and other vehicles
- 23,000 facilities on 741 million acres



*Based on data reported for vehicles and equipment

Source: Department of Energy

FIGURE 1: MAJOR FUEL TYPES USED IN GENERAL OPERATIONS - FY 1978

Most fuels used in general operations are petroleum derivatives. Nearly 427,000 barrels per day of such products were used in FY 1978, three-fourths of which were used in aircraft operations. Figure 1 shows the use of fuel by type for general operations in FY 1978.

C. Federal Energy Management Program Administration

Section 656 of the DOE Organization Act requires the Secretaries of Defense, Commerce, Housing and Urban Development, Transportation, Agriculture and Interior; the Postmaster General and the United States Postal Service; and the Administrator of General Services, each to designate one Assistant Secretary or Assistant Administrator as the principal energy conservation officer of the respective Department or Administration. Each principal conservation officer is responsible for planning and implementing respective agency energy conservation programs and for coordinating energy matters with the Department of Energy. The designated appointees, along with the Under Secretary of DOE and senior representatives of NASA and the VA, comprise a committee known as the "656 Committee", chaired by the Under Secretary of DOE. This committee meets periodically and provides general oversight for interdepartmental FEMP matters. The proposed guidelines involve this committee under certain circumstances in the process of reviewing agency plans.

Within DOE, the Under Secretary has assigned the FEMP responsibilities to the Federal Programs Office, under the Assistant Secretary for Conservation and Solar Energy. The FEMP responsibilities include policy development, overall program coordination, promotion, monitoring and reporting.

Proposed § 436.72(b)(2)(iii) requires each Federal agency to designate the name and title of a principal energy conservation officer, such as an Assistant Secretary or Assistant Administrator, to be responsible for supervising, preparing, updating, and executing the general operations plan. Additionally, each agency must designate a middle-level staff member as a point of contact to interface with the DOE Federal Programs Office at the staff level.

II. General Operations 10-Year Plan

A. General Operations Energy Management Program Elements

In the process of determining requirements for Federal agency 10-year

energy management plans, it was necessary for DOE to analyze and identify the elements which must be present to assure a workable energy management program for agency general operations. It is this program in each agency that bridges the gap between energy conservation plans and annual budgets. This analysis is contained in Appendix D, "Energy Conservation Program Elements".

Guidelines for a well-defined energy management program are necessary to ensure that consistent planning methodology and performance measurements are used throughout the Federal Government. This uniformity will facilitate annual performance reviews by the President and OMB. Further, consistent life cycle costing parameters will insure a proper allocation of resources by OMB during the budget review cycle. Each agency's energy management program, along with all other programs subject to the Federal five-year planning system, will address program resources required for the first five years of the 10-year planning period.

Proposed § 436.72(a) requires each Federal agency to prepare and submit a 10-year plan for managing energy conservation in its general operations. These plans are intended to provide the cornerstone of an agency's energy management programs.

B. Plan Format

Proposed § 436.72(b) sets forth the format and establishes the minimum requirements for individual Federal agency 10-year plans. The format calls for an executive summary and a text with appropriate appendices.

The executive summary is intended to enhance review by top management. The larger agencies should find this helpful, especially in later years, as plans become more complete and the requirement for revisions to plans pursuant to § 436.77 may be met by information contained in an executive summary. The text of the plan is designed to facilitate the preparation of the annual report to the President, mid-level management review, and the preparation of recommendations for plans and program and budget decisions by program managers. Appendices are to be included to provide for more lengthy discussion and documentation of innovative technologies or methods developed or used by an agency to promote energy conservation and energy efficiency, that may be disseminated to other Federal agencies or to the private sector. Such technologies include major studies and experimental programs in procurement, carpooling, vanpooling,

cogeneration, urban waste, renewable resources, and others. DOE will work to facilitate the appropriate dissemination of such information.

C. Plan Content

Proposed § 436.72 outlines the minimum requirements for plan content. More detailed plan content was considered, but rejected because of the wide variance in the size and complexity of operations undertaken by Federal agencies. Agencies may elaborate upon the proposed content to meet their individual needs.

Section 436.72(b)(1)(i) calls for a brief description of the agency mission and the functional categories to facilitate managerial planning of a total program.

Section 436.72(b)(1)(ii), (iii) and (iv) are summaries of material to be contained in the text of the plan which will assist management in its review of the plan.

Section 436.72(b)(1)(v) will facilitate the presentation of significant problems which may impede the agency from meeting its energy management goals.

Section 436.72(b)(2)(i) requires each agency to relate energy conservation goals to primary mission goals, e.g., the Department of Defense's energy conservation goals with respect to unit readiness goals. The same section also calls for energy conservation goals to be projected through 1990. This provides a baseline for projecting and evaluating agency performance and the effectiveness of the energy conservation measures that have been implemented. Such information can be useful to other Federal, state and local agencies as well as to the public sector. Energy conservation measures which did not meet expectations are as important to document as those which met or exceeded expectations. Some "good" energy saving ideas that appear to be cost-effective may have detrimental legal, social, or environmental impacts. Others, such as the 55 mph speed limit, may not only save energy, but may also have safety or other benefits.

Section 436.72(b)(2)(ii) calls for a planned investment program for supporting energy use and efficiency goals. DOE recognized that many of the minimum cost measures for reducing consumption and increasing efficiencies have already been taken by Federal agencies and the additional resources and time are needed for meeting significantly higher goals. However, it is also recognized that any increases in Government spending for energy must be carefully evaluated against other National priorities, e.g., inflation. Therefore, all energy investments must be well-planned, justified and cost-

effective. DOE has worked with OMB and the National Bureau of Standards and developed a life cycle costing methodology to help agencies further justify planned energy investments and develop credible annual budget programs.

The requirements of § 436.72(b)(2)(iii), (iv) and (v) should promote top management commitment to energy conservation, line management accountability, evaluation of technical expertise utilization, monitoring to validate employee conservation performance, and other key program elements contained in Appendix D. A middle-level staff member who deals directly with the DOE Federal Programs Office is to assist in developing recommendations to policy decision makers and be responsible for carrying out policy decisions in an efficient manner.

Section 436.72(b)(2)(vi) allows elaboration on issues contained in the executive summary pursuant to § 436.72(b)(1)(v) or the addition of problems or successes which are important but do not necessarily merit attention of the Secretary of DOE, Director of OMB, or the President.

III. Program Goal Setting

DOE considered three alternative methods for insuring that the requirements of the Executive Order were met:

- Have DOE prepare prescriptive rules and standards for energy use and efficiencies for each agency.
- Have DOE establish annual targets (energy budgets) for each agency.
- Allow each agency to participate in establishing its own goals and objectives.

After examining the implications of prescriptive rules and the many planning factors which would dictate energy budgets in general operations, DOE decided that it is more appropriate for each agency to establish its own goals and baselines. The guidelines require an explanation of the agency rationale or justification for its goals and baselines. This explanation will be general at best, considering the vagaries of public policy, international events, congressional interests, and public opinion. However, it is anticipated that annual updates of the plan will provide a firm basis for obtaining necessary funds. Energy use goals are to be established for each fuel type utilized in each functional category within the agency, using FY 1975 as the base year. This information, coupled with agency energy contingency plans called for in § 436.75 will assist the executive branch in reallocating funds should the need

arise. Further, most agencies already have active energy conservation programs for general operations, and in all likelihood will establish realistic goals. Should an agency encounter difficulty in establishing workable and realistic goals, or should its performance against a goal fall short of anticipated milestones or objectives, DOE can assist that agency in revising its initial plan or the annual plan update.

Energy efficiency goals, as well as energy use goals, are to be established. The tracking of energy efficiencies will assist in determining agency performance by normalizing changes in mission, e.g., energy consumption could be increasing, but services or production may be increasing at a greater rate. Conversely, an agency's missions and operations may be decreasing, but its energy use may not be falling at the same rate. Energy efficiency goals are to be selected to fit the following functional categories or others established prior to the publication of final rules:

- **General Transportation:** To include vehicles used for over-the-road driving as opposed to vehicles designed for off-road conditions; aircraft and marine vessels.
- **Industrial/Production:** Operation of buildings and plants which normally use large amounts of capital equipment, e.g., GOCO plants to produce goods (hardware).
- **Services:** The system or method of providing the use of something such as electric power, fuel, or the procurement of energy efficient automobiles and equipment.
- **Training and Operational Readiness:** Those functions which are necessary to establish or maintain an agency's capability to perform its primary mission. Included are activities to provide essential personnel strengths, skills, equipment/supply inventory, and maintain equipment condition.
- **Other:** A category established to accommodate those activities which utilize energy but do not fit into one of the other categories.

If functions defined do not satisfy unique agency missions, DOE will give consideration to expanding or redefining these categories; however, once functional categories are finally established, each agency must report its energy efficiency goals and performance within the framework of established categories. This area was the most difficult for DOE to define and agency comments and suggestions are invited.

IV. Energy Conservation Measures and Standards

Federal agencies must consider as part of their plan implementing all measures identified in Appendix C pursuant to § 436.74(a). DOE considered many measures which could be adopted by all Federal agencies for reducing energy consumption; however, after a more detailed assessment, it was determined that many of the measures were unique to only a few agencies, lacking in technical sufficiency, not cost-effective, or might cause severe degradation in mission or program performances. The measures specified in Appendix C were selected as proven methods for conserving energy or obtaining energy efficiencies with a minimum expenditure of funds. Further, most of them can be implemented with little delay and are oriented toward the people who are end users of energy or are maintaining energy-intensive capital equipment. Implementation of these measures will bring prompt reductions in energy use with minimum degradation in the effectiveness of other agency programs.

It is likely that, after evaluating the implementation of energy conservation measures listed in Appendix C, DOE will determine that it is necessary to make a measure listed in Appendix C a standard of operation under § 436.74(c). This will be done if it is determined that either the implementation of a measure is for some reason not being successfully accomplished by all agencies that could benefit from the measure, or that although implemented, because of a wide range of implementation procedures, the effectiveness of the measure is not sufficiently uniform across all of the agencies.

A standard under § 436.74(c) would differ from a measure under § 436.74(a) in that the description of its applicability and procedural elements would be more detailed. In addition, once applicability to a particular agency is established, rather than reporting to the Secretary any variance or decision not to adopt a particular measure, § 436.78 would require that a request for a waiver be filed. Waivers will only be granted if it is determined that the energy conservation measure being used by the agency in place of the standard is equal to or exceeds the energy savings potential of that standard.

Section 436.74(c) is established and Appendix A is reserved for the purpose discussed above. Standards, when issued, shall be incorporated into energy conservation plans.

DOE plans to increase its existing program of information transfer within the public sector and the private sector; therefore, many of the measures or standards which will be added in the future may come from other Federal, state and local agencies or the private sector. The DOD has already started an active program for information transfer between installation commanders and adjacent local governments. DOE is currently receiving feedback from programs initiated with state and local governments and with private industry. Again, this information will be evaluated for its applicability to Federal general operations, and those which are cost-effective will be incorporated into the guidelines either as measures or standards, as appropriate.

These guidelines, as stated in § 436.72(b)(2)(ii), require that all agency general operations plans contain a section which will describe all measures that are being taken or planned. Further, the cost and budgets for these measures must be stated in each agency plan.

Comments are invited with respect to any particular problems that might result from immediately applying measures proposed in Appendix C. Suggestions for elaboration or addition of measures or standards which are proven energy-savers in general operations are encouraged.

V. Contingency Plan

Proposed § 436.75 contains the guidelines for energy emergency planning by Federal agencies. All agencies are required to establish contingency plans for assuaging the impact of a sudden disruption in oil supplies, natural gas or electricity. Each agency will prepare plans for a mild, moderate, and severe reduction in oil-based products, natural gas and electricity.

For DOD, planning for reduction of oil-based products should take into account the provisions of Part 211.28 of Title 10, Code of Federal Regulations, which is entitled Department of Defense Allocations. It states that allocations of crude oil and any allocated product to the DOD (except for housekeeping requirements) shall be supplied at an allocation level of 100 percent.

The intent of the proposed rule is to promote contingency planning as a continuing process and to assuage that impact of a reduction of Federal services or production due to an actual sudden reduction of U.S. oil supplies, natural gas or electricity. DOE does not intend to review each agency's detailed contingency plan, but a summary and a schedule for plan development is to be

provided pursuant to § 436.72(b)(2) (iv) and (vii).

VI. Reporting Requirements

Under current legislation and executive orders, the Department of Energy is required to prepare several reports on the management and the use of energy in the Federal Government. These reports are:

- The President's Annual Report to Congress required under Section 381 of the Energy Policy and Conservation Act (EPCA).

- An annual report to the President concerning Federal Government progress toward achieving the energy conservation goals established under Executive Order 12003.

- A comprehensive annual report to the President and Congress reporting on all activities and progress toward achieving the objectives of Title V, Part 3, of the National Energy Conservation Policy Act (NECPA).

In addition, DOE is responsible for insuring that the Federal Energy Management and Planning Program is implemented effectively and efficiently. This entails many special reports and answering inquiries received from numerous Federal agencies and instrumentalities including OMB, the President's office and Congress. In order that this responsibility be carried out, it is necessary that certain information be readily available within DOE. The proposed reporting requirements were established in § 436.76 after considering the need for this requirement and the DOE objectives of requesting minimum information from the Federal agencies and minimizing the costs of modifying an existing reporting systems. Quarterly performance reports will be required from any agency whose annual energy consumption exceeds one hundred billion Btu's. These reports will show progress against the baselines established by each agency for energy reductions by fuel type and functional category. DOE has developed a format for agencies to report quarterly progress. Reporting on energy efficiencies will be accomplished annually pursuant to § 436.76(a). It is recognized that establishing a baseline and a reporting system will take time, and this fact was considered in requiring each agency to develop an implementation schedule pursuant to § 436.72(b)(2)(v).

In addition to the annual reporting requirements outlined in § 436.76, those twenty-five agencies currently reporting to DOE using FEA Form U-502-Q-1, should continue to report their current integral energy use on a quarterly basis.

VII. Plan and Waiver Submission, Review, and Approval

Under these proposed guidelines, Federal agencies are required to submit plans within six months after rules publication, with annual plan updates to be submitted thereafter. Waivers must be submitted 60 days prior to the due date for submissions.

Under proposed § 436.77, DOE will review plans and revisions for conformance with the guidelines. DOE Federal Programs Office will offer assistance to those agencies whose plans are considered deficient. Major problem areas may be submitted for review by the 656 Committee. Status and results of plan reviews and requests for waivers will be published in the annual report to the President.

VIII. National Environmental Policy Act Review

After reviewing the proposed guidelines pursuant to DOE's responsibilities under the National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321 *et seq.*, DOE has determined that the proposed administrative action does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, no environmental impact statement (EIS) or environmental assessment is necessary to support this action. DOE will determine the nature and extent of additional environmental review required by NEPA for individual agency plans for conserving energy in their general operations at the time these plans are submitted to DOE for its review and approval.

IX. Regulatory Analysis and Period for Public Comment

In accordance with the provisions of Executive Order 12044, 43 FR 12661, implementing DOE directives, and OMB Circular A-116, it is hereby determined that neither a regulatory analysis nor an urban and community impact analysis is necessary or appropriate in connection with this rulemaking. Today's proposed guidelines are deemed to be "significant" because of the widespread impact on Federal agencies of the Executive Branch. The proposed rules are not considered to be "major", however, because they will not have the kind or degree of effect which, under Executive Order 12044, necessitates a regulatory analysis.

In consideration of the rapid depletion of the Nation's nonrenewable energy resources and the need to further intensify conservation efforts at the Federal level, it is clearly contrary to the

public interest to delay final issuance of this rulemaking any longer than is absolutely required. Accordingly, it is further determined that a 30-day period rather than a 60-day period shall be provided for public review and comment on this proposed rulemaking.

X. Comment and Hearing Procedures

A. Written Comments

Interested persons are invited to participate in this rulemaking by submitting data, views or arguments with respect to today's proposed guidelines. Comments should be submitted by March 3, 1980, to the address indicated in the beginning of this preamble. Comments should be identified on the outside of the envelope and on documents submitted to DOE with the designation "FEMP GENERAL OPERATIONS GUIDELINES—Proposed rule (Docket No. CAS-RM-80-117)". Fifteen copies should be submitted. All comments received will be available for public inspection in the DOE Reading Room, Room GA-142, Forrestal Building, 1000 Independence Ave., S.W., between 8:00 a.m. and 4:00 p.m., Monday through Friday.

Pursuant to the provisions of 10 CFR 1004.11, any person submitting information which he or she believes to be confidential and exempt by law from public disclosure should submit one complete copy, and fifteen copies from which information claimed to be confidential has been deleted. In accordance with the procedures established in 10 CFR 1004.11, DOE shall make its own determination with regard to any claim that information submitted be exempt from public disclosure.

B. Request Procedures

The time and place of this public hearing are indicated in the dates and addresses section of this preamble. DOE invites any person who has an interest in the proposed rulemaking issued today, or who is representative of a group or class of persons that has an interest in today's proposed rulemaking, to make a written request for an opportunity to make an oral presentation. Such a request should be directed to the address indicated in the addresses section of this preamble, must be received before February 15, 1980 and may be hand-delivered to such address, between the hours of 9:00 a.m. and 4:30 p.m.

The person making the request should briefly describe the interest concerned; if appropriate, state why she or he is a proper representative of a group or class of persons that has such an interest; and give a concise summary of the proposed

oral presentation and a telephone number where she or he may be contacted during the day.

DOE will notify each person selected to appear at the hearing before February 19, 1980. Each person selected to be heard should bring 15 copies of his or her statement to the hearing location.

C. Conduct of Hearings

DOE reserves the right to select the persons to be heard at this hearing, to schedule their respective presentations, and to establish the procedures governing the conduct of the hearing. The length of each presentation may be limited, based on the number of persons requesting to be heard.

A DOE official will be designated to preside at the hearing. This will not be a judicial or evidentiary-type hearing. Questions may be asked by those conducting the hearing, and there will be no cross-examination. At the conclusion of all initial oral statements, each person who has made an oral statement will be given the opportunity to make a rebuttal statement. The rebuttal statement will be given in the order in which the initial statements were made and will be subject to time limitations.

Any person who wishes to have a question asked at the hearing may submit the question, in writing, to the presiding officer. The presiding officer will determine whether the question is relevant, and whether the time limitations permit it to be asked.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding officer.

A transcript of the hearing will be made, and the entire record of the hearing, including the transcript, will be retained by DOE and made available for inspection at the DOE Freedom of Information Reading Room, Room GA-152, Forrestal Building, 1000 Independence Ave., S.W., Washington, D.C., 20461, between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday. Any person may purchase a copy of the transcript from the reporter.

In consideration of the foregoing, the DOE hereby proposes to amend Chapter II of Title 10, Code of Federal Regulations, by establishing Subpart F and Appendices A, B, C, and D of Part 436 as set forth below.

Issued in Washington, D.C. January 25, 1980.

Worth Bateman,
Acting Under Secretary.

1. Part 436 of Chapter II, Title 10, Code of Federal Regulations, is amended by

adding a new Subpart F and Appendices A, B, C, and D to read as follows:

Subpart F—Guidelines for General Operations Plans

- Sec.
- 436.70 Purpose and scope.
 - 436.71 Definitions.
 - 436.72 General operations plan format and content.
 - 436.73 Program goal setting.
 - 436.74 Energy conservation measures and standards.
 - 436.75 Contingency plan.
 - 436.76 Reporting requirements.
 - 436.77 Review of plan.
 - 436.78 Waivers.

Appendix A to Subpart F of Part 436—Energy conservation Standards for General Operations [Reserved]

Appendix B to Subpart F of Part 436—Goal Setting Methodology

Appendix C to Subpart F of Part 436—General Operations Energy Conservation Measures

Appendix D to Subpart F of Part 436—Energy Conservation Program Elements

Appendix E to Subpart F of Part 436—Annual Report Format [Reserved]

Authority: Energy Policy and Conservation Act, as amended (42 U.S.C 6361); Executive Order 11912, as amended by Executive Order 12003, (42 FR 37523, July 20, 1977); National Energy Conservation Policy Act, Title V, Part 3, 92 Stat. 3275; Department of Energy Organization Act, (42 U.S.C. 7254); Executive Order 12185, (44 FR 75093, December 17, 1979).

Subpart F—Guidelines for General Operations Plans

§ 436.70 Purpose and scope.

(a) *Purpose.* The purpose of this Subpart is to provide guidelines for use by Federal agencies in their development of overall 10-year energy management plans to develop goals, to reduce the rate of energy consumption, to promote the efficient use of energy, to provide a methodology for reporting their progress in meeting the goals of those plans, and to promote agency contingency planning to assuage the impact of a sudden disruption in the supply of oil-based fuels, natural gas or electricity. The plan is intended to provide the cornerstone for a program to conserve energy in the general operations of an agency. A description of the elements necessary for a successful energy conservation program appears in Appendix D.

(b) *Scope.* This Subpart applies to all general operations of Federal agencies and is applicable to the management of all energy used by Federal agencies that is not included under the regulations in Subpart C. Energy use and energy-saving actions for Federal buildings excluded from the buildings plans under Subpart C, are to be included in the general operations plans under this Subpart.

§ 436.71 Definitions.

As used in this Subpart—

"Aviation gasoline (AVGAS)" means all special grades of gasoline for use in aviation reciprocating engines.

"Baseline" means a historic level of energy consumption based on known consumption during some base year, e.g., FY 1975, and from which comparisons may be made.

"Btu" means British thermal unit; the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

"Cogeneration" means the utilization of surplus energy, e.g. steam, heat or hot water produced as a by-product of the manufacture of some other form of energy, such as electricity. Thus, diesel generators are converted to cogeneration sets when they are equipped with boilers that make steam and hot water (usable as energy) from the heat of the exhaust and the water that cools the generator.

"Contingency Plan" means a set of instructions designed to provide guidance in the event of a possible, unforeseen, or unlikely occurrence.

"Diesel and petroleum distillate fuels" means the lighter fuel oils distilled-off during the refining process. Included are heating oils, fuels, and fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, marine diesel engines and railroad diesel fuel.

"DOE" means the Department of Energy.

"Energy Efficiency Goal" means the ratio of energy used to production achieved.

"Energy use avoidance" means the amount of energy resource, e.g., gasoline not used because of initiatives related to conservation. It is the difference in Btu's between the baseline without a plan and actual consumption.

"Facility" means any structure or group of closely located structures, comprising a manufacturing plant, laboratory, office or service center, plus equipment.

"Federal agency" means any Executive agency under 5 U.S.C. 105 and the United States Postal Service, each entity specified in 5 U.S.C. 5721(1) (B), (H) and, except that for purposes of this Subpart, the Department of Defense shall be separated into four reporting organizations: the Departments of the Army, Navy and Air Force and the collective DOD agencies, with each responsible for complying with the requirements of this Subpart.

"Fiscal Year or FY" means, for a given year, October 1 of the prior year through September 30 of the given year.

"Fuel type" means electricity, fuel oil, natural gas, liquefied petroleum gas, coal, purchased steam, automotive gasoline, diesel and petroleum distillate fuels, aviation gasoline, jet fuel, Navy special, and other identified fuels.

"General operations" means worldwide Federal agency operations, other than building operations, and includes services; production activities; operation of aircraft, ships, and land vehicles; and operation of Government-owned, contractor-operated plants.

"Goal" means a specific statement of the intended purpose and performance requirements of a scheduled, time-phased result established to fulfill an objective within a prescribed time period and reflects expected energy use, assuming planned conservation programs are approved.

"Guidelines" means a set of instructions designed to prescribe, direct and regulate a course of action.

"Industrial or Production" means the operation of buildings and plants which normally use large amounts of capital equipment, e.g., GOCO plants, to produce goods (hardware).

"Jet fuel" means fuels for use, generally in aircraft turbine engines.

"Life cycle cost" means the total cost of acquiring, operating and maintaining a measure over its economic life, including its fuel costs, determined on the basis of a systematic evaluation and comparison of alternative investments in programs outside of FEMP.

"Liquefied petroleum gas" means propane, propylene-butanes, butylene, propane-butane mixtures, and isobutane that are produced at a refinery, a natural gas processing plant, or a field facility.

"Maintenance" means activities undertaken to assure that equipment and energy-using systems operate effectively and efficiently.

"Measures" means actions, plans, procedures, devices or other means for effecting energy efficient changes in general operations which can be applied by Federal agencies.

"Measure of performance" means a scale against which the fulfillment of a requirement can be measured.

"Navy special" means a heavy fuel oil that is similar to ASTM grade No. 6 oil or Bunker C oil. It is used to power U.S. Navy ships.

"Non-renewable energy source" means those energy resources such as fuel oil, natural gas, liquefied petroleum gas, synthetic fuels, and purchased steam or electricity.

"Training and operational readiness" means those functions which are necessary to establish or maintain an agency's capability to perform its primary mission. Included are activities

to provide essential personnel strengths, skills, equipment/supply inventory and equipment condition.

"Overall plan" means the comprehensive agency plan for conserving fuel and energy in all operations, to include both the Buildings Plan developed pursuant to Subpart C and the General Operations Plan.

"Plan" means those actions which an agency envisions it must undertake to assure attainment of energy consumption and efficiency goals without an unacceptable adverse impact on primary missions.

"Program" means the organized set of activities and allocation of resources directed toward a common purpose, objective, or goal undertaken or proposed by an agency in order to carry out the responsibilities assigned to it.

"Renewable energy sources" means sunlight, wind, geothermal, biomass, solid wastes, or other such sources of energy.

"Secretary" means the Secretary of the Department of Energy.

"Services" means the system or method of providing the use of something such as electric power, fuel, or the procurement of energy efficient automobiles or equipment.

"Specific Functional Category" means those Federal agency functions which consume energy, or which are directly linked to energy consuming activities and which fall into one of the following groups: Services, General Transportation, Industrial or Production, Training and Operational Readiness, and Other.

"Standard" means an energy conservation measure determined by DOE to be applicable to a particular agency or agencies. Once established as a standard, any variance or decision not to adopt the measure requires a waiver.

"Under Secretary" means the Under Secretary of the Department of Energy.

"Variance" means the difference between actual consumption and goal.

"656 Committee" means the Interagency Federal Energy Policy Committee, the group designated in Section 656 of the DOE Organization Act to provide general oversight for interdepartmental FEMP matters. It includes the designated Assistant Secretaries or Assistant Administrator of the Departments of Defense, Commerce, Housing and Urban Development, Transportation, Agriculture, Interior and the U.S. Postal Service and General Services Administration, along with the Under Secretary of DOE and senior representatives of the National Aeronautics and Space Administration and the Veterans Administration.

§ 436.72 General operations plan format and content.

(a) Each Federal agency shall prepare and submit to DOE, within six months from the effective date of these guidelines, a general operations 10-year plan which shall consist of two parts, an executive summary and a text. Subsequent revisions to plans shall be forwarded to DOE by January 1 annually. A plan or revision to the initial plan will be considered deficient and returned to the Federal agency concerned within 60 days if it lacks any element or requirement identified in this section.

(b) The following information shall be included in each Federal agency general operations 10-Year plan for the period 1980-1990:

(1) An Executive Summary which includes—

(i) A brief description of agency mission and, (ii) the applicable functional category categories pursuant to § 436.76(a)(2);

(ii) A Goals and Objectives Section which summarizes how goals and objectives were established, and the costs and benefits of measures planned for reducing energy consumption and increasing energy efficiencies. Assumptions of environmental, safety and health effects of the goals should be included;

(iii) A chart depicting the agency organizational structure for energy management, showing energy management program organization for agency headquarters and for major subordinate elements of the agency;

(iv) A schedule for completion of requirements directed in this Subpart, including phase-out of any procedures made obsolete by these guidelines; and,

(v) Identification of any significant problem which may impede the agency from meeting its energy management goals. This statement shall be concurred with by the Assistant Secretary or Assistant Administrator responsible for total agency energy management.

(2) A Text which includes—

(i) A Goals and Objectives Section developed pursuant to § 436.73 describing agency energy conservation goals; these goals will then be related to primary mission goals;

(ii) An Investment Section describing the agency planned investment program pursuant to Appendix B to this Part, all measures selected pursuant to § 436.74, and the estimated costs and benefits of the measure planned for reducing energy consumption and increasing energy efficiencies;

(iii) An Organization Section which includes: (A) designation of the principal energy conservation officer, such as an

Assistant Secretary or Assistant Administrator, who is responsible for supervising the preparation, updating and execution of the Plan, for planning and implementation of agency energy conservation programs, and for coordination with DOE with respect to energy matters; (B) designation of a middle-level staff member as a point of contact to interface with the DOE Federal Programs Office at the staff level; and (C) designation of key staff members within the agency who are responsible for technical inputs to the plan or monitoring progress toward meeting the goals of the plan;

(iv) A Requirements and Procedures Section which includes: (A) specific tasking resulting from development of the Plan; (B) guidance for the development of contingency plans pursuant to § 436.75; (C) task milestones; and (D) listing of responsible sub-agencies and individuals at both agency headquarters and subordinate units;

(v) A Reporting and Administrative Section which includes: (A) reporting and administrative procedures for headquarters and subordinate organizations; (B) report schedules pursuant to § 436.76(c); (C) schedules for feedback in order to facilitate plan updating, to include reviews of contingency plans developed pursuant to § 436.75; (D) schedules for preparing and submitting the annual report on energy management pursuant to § 436.76(a); (E) schedules of plan preparation and publication; and (F) communication, implementation, and control measures such as inspections, audits, and others;

(vi) An Issues Section addressing problems, alternative courses of action for resolution, and agency recommendations that justify any decisions not to plan for or implement measures contained in Appendix C, and identify any special projects, programs, or administrative procedures which may be beneficial to other Federal agency energy management programs; and,

(vii) A Contingency Plan Summary Section pursuant to the requirements of § 436.75(c).

(3) Appendices as needed to discuss and evaluate any innovative energy conserving technologies or methods, not included in this Part, which the agency has identified for inclusion in its plan.

(c) Each plan must be approved and signed by the principal energy conservation officer designated pursuant to paragraph (b)(2)(iii) of this section.

§ 436.73 Program goal setting.

(a) In developing and revising plans for a projected 10-year plan each agency

shall establish and maintain energy conservation goals in accordance with the requirements of this section.

(b) The goal setting methodologies outlined in Appendix B to this Part may be used to establish agency goals pursuant to paragraph (a) of this Section.

(c) General operations energy consumption goals shall be established by each Federal agency with the broad purpose of achieving reductions in total energy consumption, without mission degradation, in support of the President's program to reduce United States dependence on insecure and uncertain foreign energy supply. Within that broad framework, each agency should seek first to reduce energy consumption per unit of output in each applicable functional category. Particular attention should be given to increased energy use efficiency in non-renewable fuel consumption. The second focus of attention should be on initiatives which shift energy use from oil to other fuels in more plentiful supply from domestic sources.

§ 436.74 Energy conservation measures and standards.

(a) Each agency shall consider for inclusion in its plan the measures identified in Appendix C to this Part.

(b) Consideration of each measure pursuant to paragraph (a) of this section shall be based on an evaluation of the following questions:

(1) Does this measure provide an incentive or a disincentive?

(2) What is the estimate of savings by fuel type?

(3) What are the direct and indirect impacts of this measure?

(4) Is this measure to be mandatory throughout the agency?

(5) If not mandatory, under what circumstances will it be implemented, and who will be responsible for determining specific applicability?

(6) Who will be the direct participants in the implementation of this measure?

(7) What incentives (if any) are to be provided for the participants?

(8) When will this measure be implemented?

(9) Will this measure be implemented in a single step or will it be phased in? If it will be phased in, over what period of time?

(10) Will performance of the measure be evaluated and reported?

(11) By what criterion will performance be determined?

(12) Who will prepare performance reports?

(13) What is the reporting chain?

(14) What is the reporting period?

(c) Each agency shall take all necessary steps to implement the energy conservation standards for general operations listed in Appendix A.

§ 436.75 Contingency plan.

(a) Each agency shall establish a contingency plan, a summary of which shall be included in the general operations plan, for assuaging the impact of a sudden disruption in the supply of oil-based fuels, natural gas or electricity. Priorities for temporarily reducing missions, production, services, other programmatic or functional activities shall be developed in accordance with paragraph (b) of this section. Planning for such contingencies are to address both buildings and general operations. Provisions shall be made for exercising emergency programs to ascertain that they are effective.

(b) Federal agencies shall prepare contingency plans for mild (5 percent), moderate (10 percent), and severe (20 percent) reductions in oil-based fuels, natural gas or electricity for a period of up to 12 months. Priorities for the allocation of scarce resources are established by the Emergency Petroleum Allocation Act of 1973 (EPAA). The EPAA priorities ensure the preservation of national defense and public health and safety. The Emergency Energy Conservation Act (EECA) directs consideration be given to the reduction of energy use in buildings and equipment, and the reduction of energy use by increased use of car pooling and mass transit. In general, Federal agency priorities shall go to those activities which directly support the agencies' primary missions. Secondary mission activities which must be curtailed or deferred will be reported to DOE as mission impacts. The description of mission impacts shall include estimates of the associated resources and time required to mitigate the effects of the reduction in energy. Other factors or assumptions to be used in energy emergency planning are as follows:

(1) Agencies will be given 15-30 days notice to implement any plan.

(2) Substitution of fuels for oil-based products and electricity are authorized, if the substitution can be completed within a 4 month period and the cost is within the approval authority of the executive branch. Renewable fuel sources should be used as a first priority. Thereafter, priorities are: coal first, and natural gas second.

(3) All costs and increases in manpower or other resources associated with activities or projects to assuage mission impacts will be clearly defined

in respective agency plans. One-time costs will be identified separately.

(4) Operating budgets will be increased if justified by the agencies, e.g. if the cost of substitute resources for oil-based product is greater, or the oil-based product has been purchased and additional funds are needed to acquire substitute resources.

(5) All justified projects and increases in operating budgets within the approval authority of the executive branch will be expeditiously approved and funds made available for prompt implementation.

(c) Summary plans for agency-wide contingency management shall be provided to DOE pursuant to § 436.72(b)(2)(vii). Such summaries shall include:

(1) Agency-wide impacts of energy reductions as determined in accordance with paragraph (b) of this section.

(2) Actions to be taken agency-wide to alleviate the energy shortfalls as they occur.

(3) An assessment of agency services or production that may need to be curtailed or limited after corrective actions have been taken.

(4) A summation of control and feedback mechanisms for managing an energy contingency situation.

§ 436.76 Reporting requirements.

(a) By July 1 of each year (following approval of a Federal agency's 10-year plan) each Federal agency shall submit an "Annual Report on Management and Consumption of Energy In General Operations," to the Secretary of DOE. This report shall include:

(1) A summary evaluation of progress toward the achievement of energy use and energy efficiency goals established by the agency in its plan;

(2) The energy use over the reporting period specified for each of the following functional categories: general transportation, industrial or production, services, training and operations readiness, and other. At a minimum, each agency shall report usage in at least one functional area other than that designated as "Other". Usage not logically includable in the specific functional categories shall be combined under "Other". The following information is to be reported for the usage of each fuel type for each functional category:

(i) Total energy used (in Btu);
(ii) Total energy use avoidance (in Btu);

(iii) Variance;
(iv) Status of planned investments

and, if different from investment program upon which existing goals are based, the expected impact on meeting projected goal; and

(v) Summary of any other benefits realized;

(3) The energy efficiencies, as calculated in accordance with Appendix B for the appropriate functional categories identified in paragraph (a)(2) of this section. The following information is to be reported for the energy efficiency for each fuel type by functional category:

(i) Efficiency for the reporting period.

(ii) Summary of any other benefits realized.

(b) Each agency's annual report shall be developed in accordance with the format described in Appendix E.¹

(c) Agencies whose annual total energy consumption exceeds one hundred billion Btu's, shall, in addition to the annual report required under paragraph (a) of this section, submit quarterly reports of the energy usage information specified in § 436.76(a)(2).

§ 436.77 Review of plan.

(a) Each plan or revision of a plan shall be submitted to DOE and a determination of compliance with the requirements of this Subpart will be made within 60 days of submission. If a plan is determined to be in compliance, written notification of such determination will be sent to the agency submitting the plan or revision. This notification shall include a critique of the plan. If determined to be deficient under paragraph (b) of this section and after review pursuant to paragraph (c) of this section, DOE will return the plan to the head of the agency submitting the plan, with an explanation of deficiencies. Agencies shall be afforded an opportunity to correct deficiencies and return the plan within an appropriate period of time for review by the Under Secretary of DOE.

(b) A general operations plan under these guidelines is deficient if it—

(1) Lacks adequate information or plan content required to be included by § 436.72;

(2) Lacks adequate goal setting methodology or baseline justification as stated in § 436.73;

(3) Lacks a well-justified investment program which considers all measures included in Appendix C; or

(4) Otherwise fails to comply with the requirements of this Subpart.

(c) After reviewing agency plans or revisions of plans, the Under Secretary of DOE, may submit to the 656 Committee for its recommendation, major problem areas or common deficiencies.

(d) Status of the plan review, the Under Secretary's decisions, and any

¹ Appendix E to be proposed at a future date.

656 Committee recommendations, will be published in the DOE annual report to the President, titled "Energy Management in the Federal Government".

§ 436.78 Waivers.

(a) Any Federal agency may submit a written request to the Under Secretary for a waiver from the procedures and requirements of this Subpart. The request for a waiver must identify the specific requirements and procedures of this Subpart from which a waiver is sought and provide a detailed explanation, including appropriate information or documentation, as to why a waiver should be granted.

(b) A request for a waiver under this section must be submitted at least 60 days prior to the due date for the required submission.

(c) A written response to a request for a waiver will be issued by the Under Secretary no later than 30 days from receipt of the request. Such a response will either (1) grant the request with any conditions determined to be necessary to further the purposes of this Subpart, (2) deny the request based on a determination that the reasons given in the request for a waiver do not establish a need that takes precedence over the furtherance of the purposes of this Subpart, or (3) deny the request based on the failure to submit adequate information upon which to grant a waiver.

(d) A requested waiver may be submitted to the 656 Committee for its review and recommendation. The agency official that submitted the request may attend any scheduled meeting of the 656 Committee at which the request is planned to be discussed. The determination to approve or disapprove a request for a waiver shall be made by the Under Secretary.

(e) Status of the requests for a waiver, the Under Secretary's decisions, and any 656 Committee recommendations, will be published, as appropriate, in the DOE annual report to the President, entitled "Energy Management in the Federal Government."

Appendix A to Subpart F of Part 436—Energy Conservation Standards for General Operations [Reserved]

Appendix B to Subpart F of Part 436—Goal Setting Methodology

In establishing and updating agency goals for energy conservation the following methodology should be utilized:

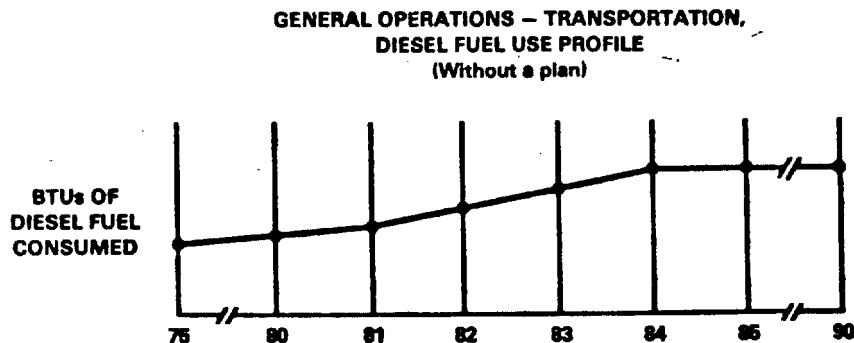
(a) For overall energy consumption—

(1) An analysis shall be made to determine what factors have the most significant impact

upon the amount of each fuel type used by the agency in performing functions in support of its overall mission. Consideration is to be given, but not limited to, the following factors: number of people using energy; number of vehicles using gasoline; amounts of other equipment using energy; tempo of operations (one, two, or three shifts); the type of operations (degree of equipment or labor intensity); equipment fuel limitations; environmental conditions (tropical versus arctic, etc.); budget levels for fuel, operations,

maintenance, and equipment acquisition; and phase-out schedule (of older equipment or plants which may be inefficient). After identifying these factors, a further analysis shall be made to identify any projected changes in the quality or quantity of these factors on a yearly basis up to 1990.

(2) Based upon the analysis in (a)(1) and an evaluation of available information on past energy usage, a baseline of energy use by fuel type should be established. Figure B-1 is an example of one such baseline.



**FIGURE B-1: GENERAL OPERATIONS – TRANSPORTATION,
DIESEL FUEL USE PROFILE (W/O A PLAN)**

This example shows an increase in energy use, for a specific fuel type, during the period 1975–1981, with a further increase from 1981 to 1984 and a leveling off and no growth from 1984–1990. A justification, based on factors as discussed above shall accompany each baseline.

(3) Thereafter, analyses should be made of the measures available for reducing the energy use profiles without adverse impact on mission accomplishment. Finding viable opportunities for reducing energy use will require consultation with specialists in the fields of operations, maintenance, engineering, design, and economics, and consideration of the measures identified in

Appendix C. The DOE Federal Energy Programs Office can, upon request, provide information on where such resources can be located. Once these measures are identified, (using the life cycle costing rules of this Part) they are to be ranked and incorporated into a time-phase investment program. An estimate must then be made as to the lead time required to implement the program and realize energy reductions. Figure B-2 shows a summarized investment program, which should be accompanied by a detailed description of the measures, projects, and programs making up the total planned investments for each year.

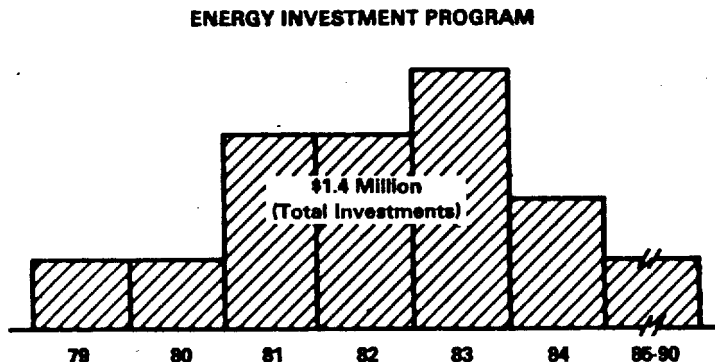


FIGURE B-2: ENERGY INVESTMENT PROGRAM

These analyses should enable the agency to project an energy use goal, with the assumption that funds for executing the

planned projects will be approved. Figure B-3 shows a new energy type profile, with planned initiatives and related investments

taken into consideration, and the resulting goal entitled "Energy Use With A Plan" superimposed on Figure B-1.

GENERAL OPERATIONS – TRANSPORTATION, DIESEL FUEL CONSUMED

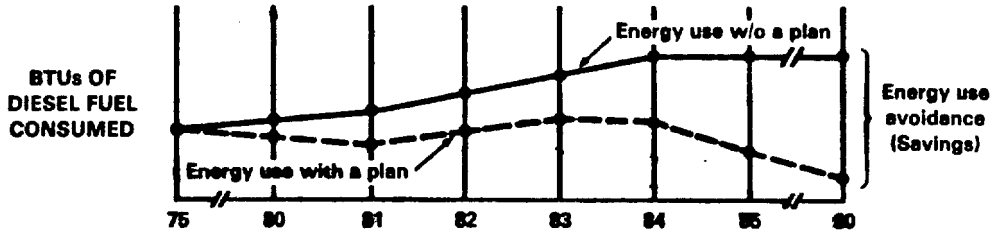


FIGURE B-3: GENERAL OPERATIONS – TRANSPORTATION,
DIESEL FUEL CONSUMED

A comparison of these projections will show the energy use avoidance in Btu's resulting from the investment program as depicted in Figure B-2. Energy use or energy savings shall be calculated using the Btu conversion table in Subpart C to Part 436, except that a Federal agency may use the conversion factors of a standard engineering reference manual for energy sources which are not listed. Using the prices of fuel contained in Appendix C to Subpart A of Part 436, the dollars saved can be projected against the dollars invested by multiplying Btu's by fuel prices. Life cycle costing pursuant to Subpart A, will be used to determine priorities for submitting individual initiatives into the appropriate budget year.

(4) Planned initiatives and related investments shall be identified by a separate line item, or uniquely identified with the agency's energy management and planning program in each agency fiscal year budget request.

(b) For energy efficiencies—Energy efficiency baselines and goals shall be calculated using the same consumption factors and similar methodology to that outlined in paragraph (a). Energy consumption by fuel type shall be linked to mission through the functional categories

listed in § 436.76(a)(2). This will identify a rate which will indicate energy efficiency trends. This linkage may be accomplished through the following algorithm:

Step 1: Determine functional categories from § 436.76(a)(2) which best describes the Agency overall mission.

Step 2: Determine types of fuels used to support the function by inventorying the equipment and/or activities using fuel within the functions selected in Step 1.

Step 3: Determine quantities of fuel consumed or planned for consumption over a specific period of time, i.e. yearly, quarterly, etc. Quantify in Btu's/period of time.

Step 4: Determine quantity of output of function for same period of time used in Step 3. Quantify output in a standard measure which best describes functional category.

Step 5: Determine the energy efficiency ratio by dividing quantity from Step 3 by quantity from Step 4.

This ratio of Btu's consumed to a unit measure of output will be used to develop a projection of a baseline and goals through 1990, and used in reporting variance. Examples of ratios that should be considered are:

- Production or industrial process type operations

Btu's
Ton of product
• Services, such as postal delivery

Btu's
Customers served or pounds delivered
• Services such as research and development, which do not produce hardware

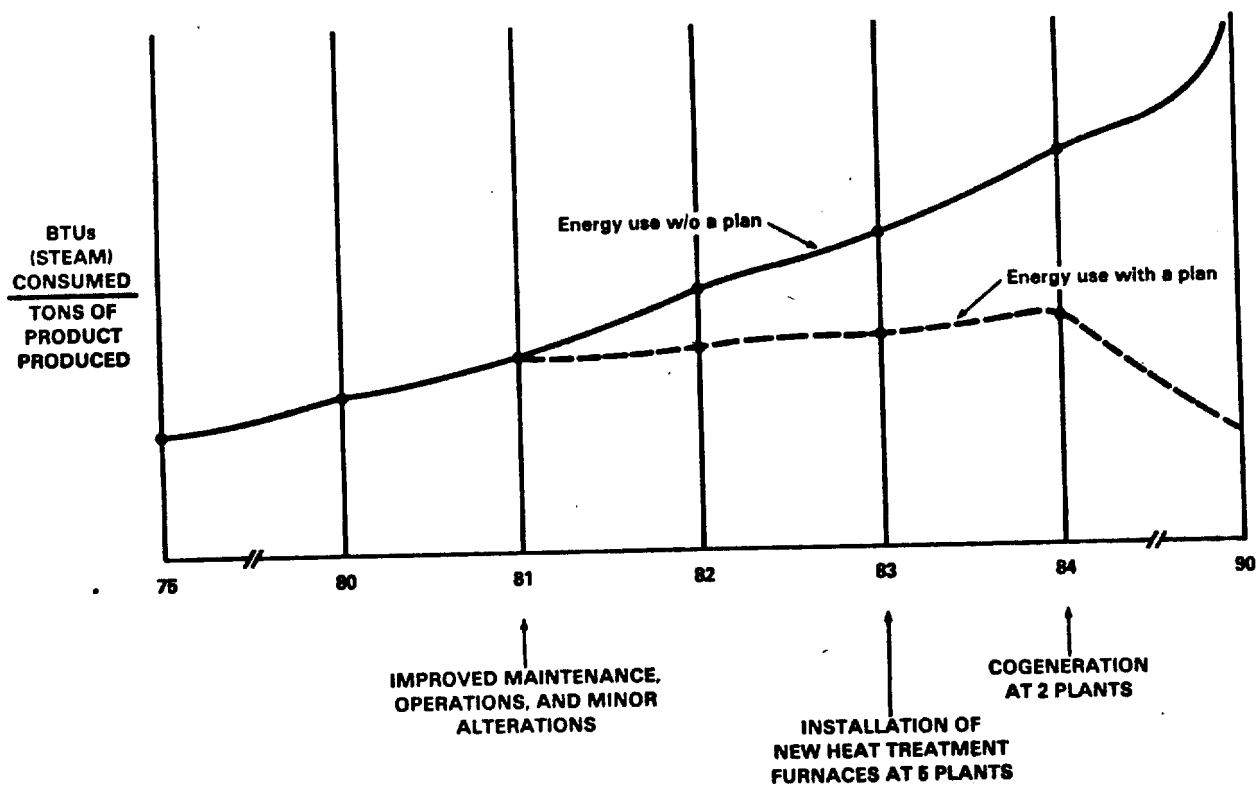
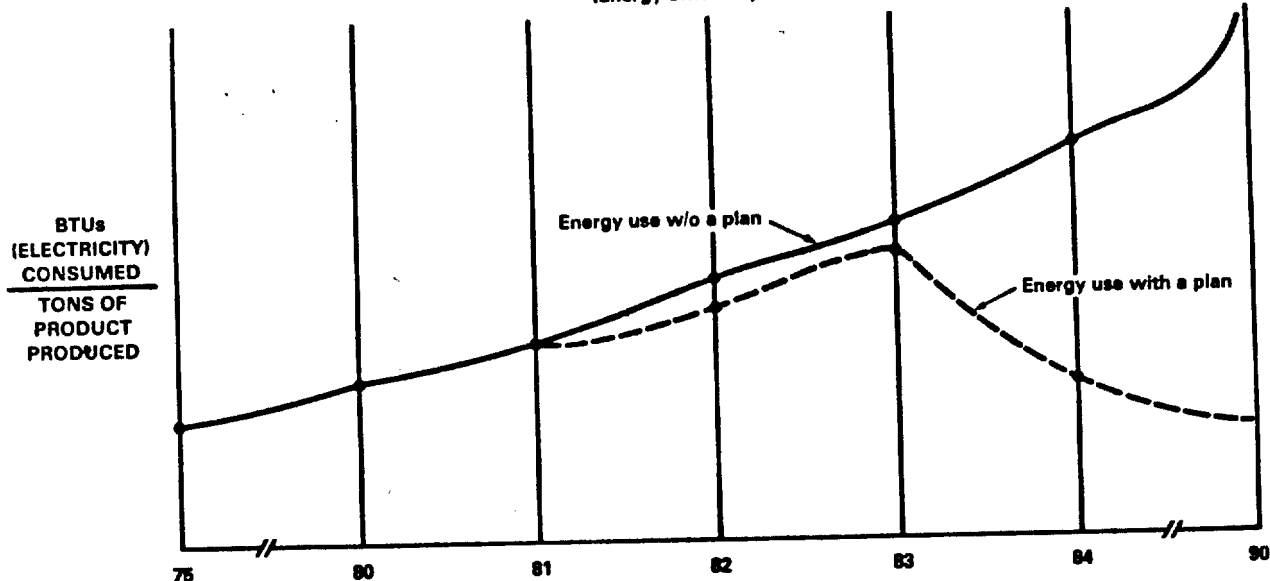
Btu's consumed annually
Annual R&D Budget (in constant dollars)

• General Transportation
Passenger miles
Gallon
Ton miles
gallon

• Training
Btu's
Persons trained or in training

Agencies shall select one or more of these ratios, or justify use of more appropriate energy efficiency ratios, to describe their overall functions. Figure B-4 illustrates the planning baseline and goal resulting from this type of an analysis.

BILLING CODE 6450-01-M

GENERAL OPERATIONS
(Energy efficiency trend)**FIGURE B-4: GENERAL OPERATIONS, ELECTRICITY, STEAM CONSUMED**

BILLING CODE 6450-01-C

**Appendix C to Subpart F of Part 436—
General Operations Energy Conservation
Measures**

(a) The following individual measures or set of measures must be considered for inclusion in each agency 10-year energy management plan.

(1) **Federal Employee Ridesharing Programs**—These measures would include the use of vanpooling and carpooling and would comply with existing GSA regulations governing parking.

(2) **Fleet Profile Change**—These measures would include energy considerations in equipment selection and assignment.

(3) **Fleet Mileage Efficiency**—These measures would be concerned with agency plans to implement existing orders and laws related to vehicle fuel economy.

(4) **Driver Training**—These measures would develop appropriate programs for training operators of U.S. Government vehicles in energy conservation.

(5) **Maintenance Procedures Improvement**—These measures would insure proper vehicle maintenance to optimize energy conservation.

(6) **Operating Procedures Improvement**—These measures should consider cooperative passenger shuttle and courier services on an interagency or other basis within each metropolitan area.

(7) **Mass Transit**—These measures would encourage employee use of existing services for business-related activities and commuting.

(8) **Public Education to Promote Vanpooling and Carpooling**—All agencies should consider measures to support the EPCA requirement to establish "responsible public education programs to promote vanpooling and carpooling arrangements" through their employee awareness programs.

(9) **Elimination of Free or Subsidized Employee Parking**—Free or subsidized employee parking must be eliminated on Federal installations in accordance with OMB Cir. A-118, August 13, 1979.

(10) **Two-Wheeled Vehicle Programs**—Measures which encourage the substitution of bicycles, mopeds, etc. for automobiles for commuting and operational purposes should be considered. These could include the establishment of weather-protected secure storage facilities and restricted routes for these vehicles on Federal property. Also, cooperative programs with local civil authorities could be established.

(11) **Consolidation of Facilities and Process Activities**—These measures would include such measures as physical consolidation of operations to minimize intra-operational travel and may include facility closure or conversion. Alternative work patterns, availability of transportation, energy resource availability, and technical and financial feasibility are among the considerations that should be evaluated.

(12) **Procurement Programs**—In addition to existing regulations, these measures could include additional incentives for contractor energy conservation.

(13) **Energy Conservation Awareness Programs**—These programs would be aimed

toward gaining and perpetuating employee awareness and participation in energy conservation measures on the job and in their personal activities.

(14) **Communication**—These measures would include substitution of communications for physical travel.

(15) **Dress Codes**—These measures would allow employees greater freedom in their choice of wearing apparel in view of the new thermostat regulations.

(16) **Land Use**—These measures would include energy considerations to be employed in new site selection.

(17) **Automatic Data Processing (ADP)**—These measures would address all energy aspects of ADP operation and equipment selection.

(18) **Aircraft Operations**—Energy-conserving measures should be developed for both military and Federal administrative and research and development aircraft operations.

(19) **GOCO Facilities and Industrial Plants Operated by Federal Employees**—These facilities and plants should develop energy conservation plans that include energy efficient periodic maintenance measures.

(20) **Energy-Conserving Capital Plan and Equipment Modification**—Energy conservation and life cycle cost parameter measures should be developed for replacement of capital plant and equipment.

(21) **Process Improvements**—Measures to improve energy conservation in industrial process operations should be developed. These could include consideration of equipment replacement or modifications, as well as scheduling and other operational changes.

(22) **Improved Steam Maintenance and Management**—Measures to improve energy efficiency of steam systems should be considered. These could include improved maintenance, installation of energy-conserving devices, and the operational use of substitutes for live steam where feasible.

(23) **Improvements in Waste Heat Recovery**—Measures utilizing waste heat for other purposes should be considered.

(24) **Improvement in Boiler Operations**—Energy-conserving retrofit measures should be considered for boiler operations.

(25) **Improved Insulation**—Measures addressing the addition or replacement of insulation on pipes, storage tanks, and in other appropriation areas should be considered.

(26) **Scheduling by Major Electric Power Users**—Measures to shift major electrical power demands to non-peak hours, to the maximum extent possible, should be considered.

(27) **Alternative Fuels**—Measures should be considered to alter equipment such as generators to lower quality fuels and to fill new requirements with those that use alternative fuels. The use of gasohol in stationary gasoline-powered equipment should be considered, in particular.

(28) **Cogeneration**—Measures to make full use of cogeneration in preference to single-power generation should be considered.

(29) **General Training**—All agencies should consider measures to support the EPCA requirement to establish and implement "a

responsible public education program to encourage energy conservation and efficiency" through their employee awareness programs.

(30) **Mobility Training and Operational Readiness**—All agencies should consider measures which can reduce energy demands through the use of simulators, communications, computers for planning, etc.

(31) **Energy Conservation Inspection or Instruction Teams**—Agencies should consider measures which formalize and perpetuate the review of energy conservation through inspections to determine where specific improvements can be made and then followed by an instruction and training program.

(32) **Intra- and Interagency Information Exchange Program**—Measures providing a free exchange of energy conservation ideas and experiences between elements of an agency and between other agencies in the same geographic area should be considered.

(33) **Recycled Waste**—Agencies should consider measures to recycle waste materials to include glass, aluminum, concrete and brick, garbage, asphalt road materials and any material which requires a petroleum base.

(34) **Coal Conversion**—Measures to accomplish conversion from petroleum-based fuels to coal should be considered for appropriate equipment.

(35) **Operational Lighting**—Energy for lighting consumed in operational areas and GOCO plants may be reduced by: switching off by means of automatic controls; maximizing the use of daylight by floor planning; keeping window and light fixtures clean and replacing fixtures when they begin to deteriorate, rather than when they fail altogether; providing automatic dimmer controls to reduce lighting when daylight increases; and cleaning the work area during daylight, if possible, rather than at night.

(36) **Lighting Fixtures**—Energy efficiency of lighting can be increased. The following reveals the relative efficacies of common lamp types.

Lamp type	Lumens/ watt	Improvement over tungsten
Tungsten Lamp	92	X1
Modern fluorescent lamp	85	X7
Mercury halide lamp	100	X8
High pressure sodium lamp	110	X9
Low pressure sodium lamp	180	X15

(37) **Industrial Buildings Heating**—Simple measures to improve the energy conservation of industrial buildings are: fixing holes in roofs, walls and windows; fitting flexible doors; fitting controls to heating systems; use of "economizer units" which circulate hot air back down from roof level to ground level; use of controlled ventilation; insulation of walls and roof; use of "optimisers" or optimum start controls to heating systems, so that the heating switch-on is dictated by actual temperature conditions rather than simply by time.

(38) **Hull Cleaning and Antifouling Coating**—Measures to reduce energy consumption through periodic cleaning of hulls and propellers to include the use of antifouling coatings.

(39) Such other measures as DOE may from time-to-time add to this Appendix, or as the Federal agency concerned may find to be energy-saving or efficient.

Appendix D to Subpart F of Part 436—Energy Conservation Program Elements

(a) In all successful energy conservation programs, certain key elements need to be present. The elements listed below must be incorporated into each agency energy conservation program and must be reflected in the 10-year plan prescribed in Section 436.72. Those organizations that have already developed programs should review them to determine whether the present management systems incorporate these elements.

(1) *Top Management Commitment.* Top management must have a personal and sustained commitment to the program, provide active direction and motivation, and require regular review of overall energy usage at senior staff meetings.

(2) *Line Management Accountability.* Line managers must be accountable for the energy conservation performance of their organizations and should participate in establishing realistic goals and developing strategies and budgets to meet these goals.

(3) *Formal Planning.* An overall 10-year plan for this period 1980-1990 must be developed and formalized which sets forth performance-oriented conservation goals, including the categorized reduction in rates of energy consumption that the program is expected to realize. The plan will be supplemented by guidelines enumerating specific conservation procedures that will be followed. These procedures and initiatives must be life cycle cost-effective as well as energy efficient.

(4) *Goals.* Goals must be established in a measurable manner to answer the questions of "Where are we?" "Where do we want to go?" "Are we getting there?" and "Are our initiatives for getting there life cycle cost-effective?"

(5) *Monitoring.* Progress must be reviewed periodically both at the agency headquarters and at local facility levels to identify program weaknesses or additional areas for conservation actions. Progress toward achievement of goals should be assessed, and explanations should be required for non-achievement or unusual variations in energy use. Monitoring should include personal inspections and staff visits, management information reporting and audits.

(6) *Using Technical Expertise.* Personnel with adequate technical background and knowledge of programmatic objectives should be used to help management set technical goals and parameters for efficient planning and implementation of energy conservation programs. These technicians should work in conjunction with the line managers who are accountable for both mission accomplishment and energy conservation.

(7) *Employee Awareness.* Employees must gain an awareness of energy conservation through formal training and employee information programs. They should be invited to participate in the process of developing an energy conservation program, and to submit definitive suggestions for conservation of energy.

(8) *Energy Emergency Planning.* Every energy management plan must provide for programs to respond to contingencies that may occur at the local, state or National level. Programs must be developed for potential energy emergency situations calling for reductions of 5 percent, 10 percent and 20 percent for up to 12 months. Emergency programs must be exercised to ascertain the effectiveness.

(9) *Budgetary and Fiscal Support.* Resources necessary for the energy conservation program must be planned and provided for, and the fiscal systems adjusted to support needed energy management investments and information reporting.

2. It is proposed to amend Part 436 by adding Appendix E to Subpart F of Part 436, Annual Report Format, at a future date. For further information on this appendix, contact: Jack A. Vitullo, (202) 376-4720, Office of Conservation and Solar Energy, Department of Energy, 20 Massachusetts Ave., N.W., Washington, D.C., 20585.

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